Next, processing for copying physical blocks, in which the data items of the optical disc **24** installed in the garbage drive **1** and storing low-frequency data items are stored, into unused physical blocks of the other optical discs **24** for storing low-frequency data items is carried out. As shown in FIG. **4**, this processing is performed with respect to optical discs **24** for storing low-frequency data items whose priority flags are "2" to "9", in this order, and continued until all the used physical blocks of the optical disc **24** for storing low-frequency data items which has a priority flag of "1" are copied. In this case, the optical disc drive which is used as the copy destination is called a garbage drive **2**. In this processing, the physical flag of the used physical block as the copy source is set to "unused" and the physical flag of the unused physical block as the copy destination is set to "used", in the physical block management table **34**. Further, in the logic block management table **33**, the optical disc No. and the physical block No. which indicate the data storage position is updated.

When the copying of physical blocks is completed, the optical disc **24** in the garbage drive **1**, which is completely empty, is detached therefrom and returned to a container cell. Then, "1" is subtracted from each of the priority flags **1** to **9** in the optical disc management table **36**. Finally, an optical disc **24** for storing low-frequency data items, which has the smallest priority flag, is selected from optical discs in the container cells **21***a* to **21***d*, and the selected disc is installed into the garbage drive **1**. The corresponding drive flag in the optical disc drive management table **37** is set to "low-frequency", and the corresponding optical disc No. is set to the No. of the installed optical disc **24**. The processing is then returned.

FIGS. **26**A to **26**C show flow-charts of garbage collection **2**, and FIG. **5** schematically shows the processing of the garbage collection **2**. At first, 1 is substituted into a parameter "I". Whether or not an optical disc **24** for storing low-frequency data items, which has a priority flag of "I", is installed in one of optical disc drives **22***a* to **22***d* is checked. If not installed, an optical disc drive in which an optical disc **24** for storing low-frequency data items, which has the largest priority flag, is installed is selected from the optical disc drives **22***a* to **22***d*, and the selected optical disc drive is defined as the garbage drive **1**. The optical disc **24** for storing low-frequency data items, which has a priority flag of "I", is installed into the garbage drive **1**.

If an optical disc **24** for storing low-frequency data items, which has a priority flag of "1", has already been installed in one of optical disc drives **22***a* to **22***d*, the one optical disc drive is set as a garbage drive **1**. Thereafter, in the optical disc drive management table **37**, the drive flag corresponding to the garbage drive **1** is set to "garbage" and the corresponding "optical disc No." is set to the No. of the optical disc which has been installed in the garbage drive **1**. Next, a is added to the parameter "I", and the same processing as stated above is performed, so that an optical disc **24** for storing low-frequency data items, which has a priority flag of "I", is installed into the garbage drive **2**.

Thereafter, data items of used physical blocks of the optical disc **24** for storing low-frequency data items, installed in the garbage drive **2**, are copied into unused physical blocks of the optical disc **24** for storing low-frequency data items, installed in the garbage drive **1**. Then, in the physical block management table **34**, the physical flags of "used" physical blocks which serve as copy sources are set to "unused", and the physical flags of "unused" physical blocks which serve as copy destinations are set to "used". Further, in the logic block management table **33**, the optical disc No. and the physical block No. indicating the data storage destinations are updated.

Next, the drive flags of the garbage drives **1** and **2** are reset to "normal". The above processing is repeatedly performed until the parameter "I" reaches 9.

Thereafter, the optical disc **24** installed in the garbage drive **2**, which is completely occupied by empty regions, is detached from the drive and is returned to a container cell. The priority flag of the empty optical disc **24** is changed fro 9 to −1. Finally, an optical disc **24** which has the smallest priority flag is selected from the optical discs **24** for storing low-frequency data items, contained in the container cells **21***a* to **21***k*, and the selected optical disc is installed into the garbage drive **1**. In the optical disc drive management table **37**, the drive flag corresponding to the garbage drive **1** is set to "low-frequency", and the optical disc No. is set to the No. of the optical disc **24** thus selected and installed. Then, the processing is returned.

As has been explain above, the access frequency is estimated with respect to the data item which is staged out from the cache HDD storing data items which are accessed at frequencies. The data item which is estimated to be accessed at a middle frequency is written into an optical disc for storing middle-frequency data items, which is installed in one of optical disc drives **22***a* to **22***d* and which is accessed at a relatively high probability. The data item which is estimated to be accessed at a low frequency and whose contents have been updated is written into an optical disc for storing low-frequency data items, which is also installed in one of optical disc drives **22***a* to **22***d* and which is accessed at a low probability.

Therefore, access to optical discs is concentrated to the optical disc for storing middle-frequency data items or the optical discs for storing low-frequency data items which are all installed in the optical disc drives. As a result, exchanges of optical discs can be reduced in number of times, and thus, the response ability of the apparatus can be improved.

Further, frequency estimation processing is carried out to determine a destination storage every time when an data item is accessed, an data item is copied to a cash HDD, and a data item is staged out from the cash HDD. Therefore, even when the pattern of accessing data items varies and the group of accessed data items changes in accordance with time (e.g., from a group of low-frequency data items to a group of middle-frequency data items or the versus), data is re-arranged in accordance with such variation or changes, and as a result, the response ability of the apparatus can also be improved.

In addition, although garbage collection for collecting unused regions to prepare an empty optical disc requires much time, normal processing such as reading of an image required by an external device can be performed with priority to the garbage collection, since methods of garbage collection are selected in accordance with operational states of the apparatus. Specifically, when an optical disc for storing middle-frequency data items is filled with data, reference is made to past records which indicate operational states (e.g., the frequency with which access is required by an external device). If there is much time to spare, garbage collection **1** is carried out, and if there is no time to spare, garbage collection **2** is carried out.

Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, representative devices, and illustrated examples shown and described herein. Accordingly, various modifications may be